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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,367	10/22/2003	Michael A. McCabe	2002-IP-008009U1	1396
7590 07/16/2007 Halliburton Energy Services Robert A. Kent 2600 S. 2nd Street Duncan, OK 73536-0440			EXAMINER BUTTNER, DAVID J	
			ART UNIT 1712	PAPER NUMBER
			MAIL DATE 07/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/691,367

Applicant(s)

MCCABE ET AL.

Examiner

David Buttner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/21/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/21/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Claims 36-52 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gupta '832.

Gupta claims (#1,2) fracturing subterranean formations with an aqueous fluid of gelling agent (eg hydroxypropylguar) and crosslinking agent at a pH of 10-12. According to applicant (paragraph 6) this pH causes the insoluble residues to dissolve.

Presumably, Gupta would inherently be devoid of insoluble residues also. Note that applicant does not consider crosslinkers to be insoluble gelling agent (paragraph 17 of spec). The amount of gelling agent is 10-100 pounds per thousand gallons of water (col 3 line 58). In regards to claim 45's addition of water in two separate steps, any number of water additions (as long as the total water is the same) would result in the same final product. Any mixing order or partial additions in the mixing sequence would have been prima facie obvious.

Claims 36-52 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Briscoe '145.

Briscoe teaches aqueous well treating fluids (col 1 line 8). Briscoe exemplifies liquid gel concentrates (table I) of hydroxypropylguar, water, NaOH and optionally inhibitor. Also table III has an example solely containing guar gum, NaOH and water. The pH of the mixture is 9-14 (col 10 line 27). This envelops applicant's preferred pH range of "about 10-13" (claim 34). According to applicant (paragraph 6) this pH causes the insoluble residues to dissolve. Presumably, Briscoe would inherently be devoid of insoluble residues also. The concentrate can be diluted at a 1:15 ratio with additional

water (col 8 line 15). In order to reverse the inhibition, acid can be added to lower the pH to 5-9 (col 7 line 40). The pH adjustment is not always necessary (col 8 line 8).

Claims 36-52 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Brannon '026.

Brannon teaches guar based gels (abstract) for use in subterranean formations (col 1 line 7). Brannon adds 20 lbs + 100 lbs of polymer and a pH adjuster such as ammoniumhydroxide to 1000 gallons of water (col 5 line 18-25). The pH is 10-11 (col 5 line 26). The pH and polymer concentration correspond to applicant's preferred amounts (eg claim 40) and therefore it is presumed that no gelling agent residue remains. Brannon teaches the amount of gelling agent is initially 0-100 pounds per thousand gallons (col 4 line 37) with a later addition of 10-300 pounds more (col 4 line 51). Note that applicant (paragraph 4) considers "insoluble residues" to be proteins, cellulose and fibers – not the guar itself. Therefore, Brannon's late added unhydrated guar cannot be considered an "insoluble residue" based on applicant's definitions. Any proteins, cellulose, fiber contained within the late added unhydrated guar, will immediately dissolve upon hydration due to the pH.

Claims 36-52 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yeh '825.

Yeh produces polygalactomannan which transmits light (abstract). The light transmission is believed to be due to the lowered insolubles (col 1 line 45; col 2 line 67; col 6 line 34). Yeh's method involves treating a material such as hydroxypropylguar (col 5 line 42) with a solution of NaOH (col 4 line 26-41). Yeh then washes (col 4 line 42)

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and dries (col 5 line 3) the polygalactomannan. The resulting material will form stable aqueous solutions (col 6 line 45) and is useful in oil recovery (col 6 line 56). Yeh's "extra" washing and drying steps are not excluded by applicant's claims.

Applicant's arguments filed 5/21/07 have been fully considered but they are not persuasive.

Applicant argues Gupta, Briscoe and Brannon do not disclose that their fluids are substantially devoid of insoluble gelling agent residue.

This is not convincing. Each of the references raise the pH of their solutions as does applicant. This is the only step applicant requires to dissolve the insolubles. Inherently, the references must be dissolving the insolubles because it is the SAME process step that applicant teaches. This is the rationale tending to show inherency referred to in MPEP 2112. The burden of showing otherwise is shifted to applicant. Simply inserting into the claims a new function (ie reducing insolubles) of a known process (ie raising the pH of a guar solution) does render the claims patentable.

Applicant argues that Gupta, Briscoe and Brannon do not necessarily wait sufficient time for the residues to dissolve because dissolution is not instantaneous.

This argument is totally unsupported. Applicant's specification never indicates there is any significant time delay before dissolution takes place. Applicant fails to even allege what length of time would be required for dissolution nor speculates on the length of time that would elapse for the reference compositions prior to introduction into the subterranean zone. The references would be not be expected to send their

compositions into the subterranean zone mere seconds after mixing. Mixing, storage and transportation to the entrance all will take a certain amount of time.

Applicant argues Yeh's composition is not substantially devoid of all insoluble gelling agent residues as Yeh states the amount of enzymatic hydrolysis residue is 1-2%.

It is not clear if "enzymatic hydrolysis residues" are the same residues applicant refers to that includes proteins, cellulose and fibers (paragraph 4 of spec). Yeh (col 6 line 33-39) indicates his protein content is low. Even if these are the same residues applicant is referring to, applicant's specification never numerically defines what constitutes "substantially free". There is nothing of record to indicate 1-2% doesn't meet the claims.

Applicant argues Yeh adds basic solution to unhydrated guar rather than to the viscous aqueous guar.

This distinction is trivial. In effect, Yeh is performing the hydrating step and basic treating step all at once. Applicant gives no explanation why Yeh's process results in a composition any different from applicant's composition. Any mixing order (including simultaneous mixing of all) is prima facie obvious (in re Hampel 171 USPQ 171,173).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 571-272-1084. The examiner can normally be reached on weekdays from 10 to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Buttner

DAVID J. BUTTNER
PRIMARY EXAMINER

7/9/07

